

# **Tucson Iron & Metal**

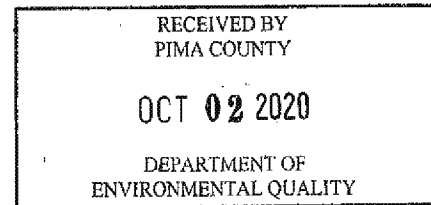
Custom Incineration

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September 30, 2020

Ms. Jacqueline Ronstadt, Air Compliance Manager  
Pima County Department of Environmental Quality  
33 N. Stone Avenue, Suite 700  
Tucson, Arizona 85701-1429



**Tucson Iron and Metal**  
**Contraband Incinerator-Class II Air Permit #127**  
**Permit Action: #127-0015R**  
**NSPS EEEE Semi-Annual Report**  
**Tucson, Pima County, Arizona**

Dear Ms. Ronstadt:

Tucson Iron & Metal (TIM) is submitting this report as a supplement or revision to the 2020 1<sup>st</sup> semi-annual report to Pima County Department of Environmental Quality (PDEQ) for the TIM Other Solid Waste Incineration (OSWI) unit for the period from January 1, 2020, through June 30, 2020.

On August 28, 2020, PDEQ requested TIM provide a revision to the 2020 1<sup>st</sup> semi-annual report reflecting a correction to the total carbon monoxide (CO) emissions during the report period due to the continuous emission monitoring system (CEMS) being out-of-control (OOC). TIM had not conducted a Reasonable Accuracy Test Audit (RATA) after the December 2019 installation of its new CEMS through the end of the 1<sup>st</sup> semi-annual period of 2020 resulting in the OSWI unit being OOC. 40 CFR 60 Appendix F 5.2.2 specifies that during the OOC period the CEMS data may not be used in calculating emission compliance. As previously reported for the period beginning January 1, 2020, through June 30, 2020, TIM conducted a total of 14 burn days; the duration of all of these burns totaled 79.65 hours.

The PDEQ air permit #127 and the New Source Performance Standard (NSPS) Subpart EEEE specify a CO emission limit of 40 ppm @7% oxygen (O<sub>2</sub>) which is equivalent to approximately 1.29 pounds CO per hour (lb CO/hr). There is no CO mass emission rate limit in permit #127 but TIM calculated an equivalent mass emission rate of 1.29 lb CO/hr from the concentration limit and exhaust flow at the afterburner chamber exit. Based upon 79.65 total hours of contraband incineration and the equivalent to the emission limit during the first half of 2020, the compliant amount of CO emitted during the report period is a total of (1.29 lb CO/hr)(79.65 hours) = 102.75 pounds CO. It should be noted that the lb per hour mass emission rate is not subject to a percent O<sub>2</sub> in the exhaust stream, only the concentration of CO (in ppm) is subject to %O<sub>2</sub> and is corrected to 7%O<sub>2</sub>.

The permit #127, Section 3, Standards Of Performance For OSWI Units, provision number 62.f. includes the statement that if the CEMS is temporarily unavailable to meet data collection

requirements then refer to Table 3 of this condition which shows alternate methods for collecting data when systems malfunction or are under repair... which is followed by Table 3 of NSPS EEEE. TIM understands the referenced Table 3 refers to the Performance Specifications and Methods used in the CEMS to monitor CO and O<sub>2</sub>. It is the specified design criteria for the CEMS. Permit provision #60.c. provides the clarification: "Table 3 of this subpart shows the required span values and performance specifications that apply to each continuous emission monitoring system."

In the August 28, 2020, Permit Action 127-0015R letter request, PDEQ specified an OOC mass emission rate for the OSWI unit of 2.20 lb CO/hour which should be used until the CEMS has passed a RATA.

**2020 Deviations of CO Limitation – 01.01.2020 through 06.30.2020:**

NSPS Subpart EEEE, section 60.2918 states that "The emission limitations and operating limits apply at all times except during OSWI unit startups, shutdowns, or malfunctions. The CO emission concentration limit is equivalent to 1.29 lb/hour (which corresponds to the NSPS EEEE 40 ppm CO @7%O<sub>2</sub> limit). Any reference TIM has made in past communications to the CO mass emission rate with regard to 7%O<sub>2</sub> was meant to be a reference to the original CO concentration limit.

Bison Engineering Conducted a RATA on July 21, 2020. The RATA confirmed the TIM CEMS was working properly and accurately. The Bison Engineering RATA report was provided to TIM, dated August 12, 2020, and was forwarded to PDEQ. An additional RATA was conducted with the scheduled September 2020 stack test.

PDEQ reached an OOC OSWI unit average CO mass rate value based upon a ratio of normal operation hours and startup/shutdown hours, which results in a weighted average 1.76 lb/hour. PDEQ then took 125% of the weighted average CO rate as identified in the attachment to the July 22, 2020 PDEQ letter to TIM. Since the CEMS was 'on,' but 'out-of-control' CEMS data cannot be used to report compliance issues until the CEMS passes a RATA. The PDEQ calculation indicates an OOC value for CO of 2.20 lb CO/hour.

Since CEMS data cannot be used during OOC periods all 79.7 hours during which the OSWI unit operated in the first half of the year should be used to calculate the OOC emissions of CO. TIM has shown that the compliant CO emission rate is 1.29 lb/hr based upon 40 ppm CO @7% O<sub>2</sub> at the afterburner exhaust point during hours of normal operation. During the OOC period the compliant mass emission of CO was (1.29 lb/hr)(79.65 hrs) = 102.75 lbs CO. The OOC emission of CO was (2.20 lb/hr)(79.65 hrs) = 175.23 lbs CO.

The 1-hour average CO OOC exceedances resulted in excessive CO emissions during the OOC period of:

$$(175.23 \text{ lbs} - 102.75 \text{ lbs}) = 72.48 \text{ lb of CO}$$

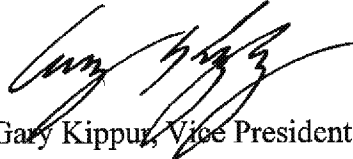
None of the above events resulted in a federal reportable quantity (RQ) of CO emissions (defined as 5,000 pounds for CO).

The CEMS reasonable accuracy test audit (RATA) was scheduled for July 21, 2020 (a one burn duration test). The TIM CEMS passed the RATA as reported by Bison Engineering in its August 12, 2020, letter to TIM and suggested a retest during its September 9-10, 2020 stack test. During the September 2020 stack test the CEMS passed the follow-on RATA.

I am the Responsible Official (R.O.) for Tucson Iron & Metal and I certify that, based on information and belief formed after reasonable inquiry, during the time period from January 1, 2020, through June 30, 2020, the information is true, accurate, and complete; and, I further certify that this compliance certification and deviation report, for the period from January 1, 2020, through June 30, 2020, to the best of my knowledge, is true, accurate and complete.

If you have any questions or require additional information, please contact me at 520-884-1554.

Sincerely,



Gary Kippur, Vice President

cc: Mr. Matt Salazar, Manager  
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